are detected and attempted to recover actual data bits. It also provides error reporting mechanism to the sender.

Flow control

Stations on same link may have different speed or capacity. Data link layer ensures flow control that enables both machine to exchange data on same speed.

Multi - access

When host on the shared link tries to transfer the data, it has a high probability of collision. It provides mechanism such as CSMA/CD to equip capability of accessing a shared media among multiple systems.

6) Mobile Network layer

Terminology used in Network layer

*) HA - Home Agent

*) FA - Foreign Agent

*) HN - Home Network

*) FN - Foreign Network

*) CN - Correspondent Node

*) COA - Care of Address

*) MN - Mobile Node

Mobile Node (MN):-

*) It is an end-system (or) router that can change its point of attachment to the internet using mobile IP.

*) It keeps its IP address and can continuously communicate with any other system in the internet as long as link layer connectivity is given.

Correspondent Node (CN):-

*) At least one partner is needed for communication

*) So the CN represents this partner for the Mobile node.

*) The CN can be a fixed (or) mobile host.

Home Network, Foreign Network

*) It is the subnet of the Mobile Node belongs to with respect to its IP address. No IP mobile is needed within the home network.

*) The foreign N/w is the current subnet of the Mobile Node visits and which is not the home network.

Foreign Agent :-

*) It can provide several services to the mobile node during its visit to the foreign network.

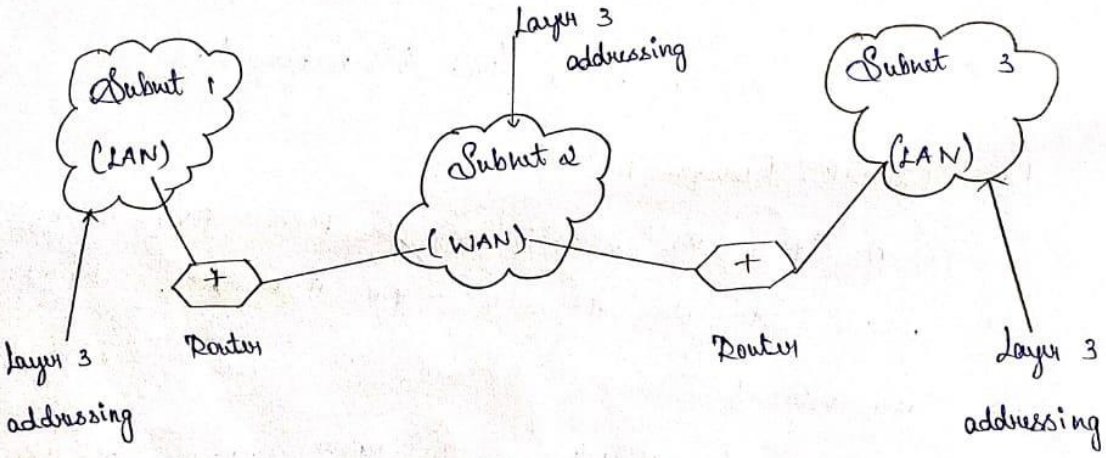
*) It can have the care of address (COA) acting as tunnel end point and forwarding packets to the Mobile Node.

*) It can also provide security services.

*) For mobile IP functioning, FAS are not necessarily needed.

*) Typically, an Foreign Address is implemented on a router for the subnet.

Router Function in Network layer



[Router is used to connect two different Networks.]

Care of Address :-

*) It defines the current location of the mobile node.

*) Tunnel can be used for packet delivery towards MN.

*) There are two different possibilities for location of the COA.

(i) Foreign agent COA

(ii) Colocated COA

Home Agent :-

*) It provides several services for the mobile node and its located in the home network.

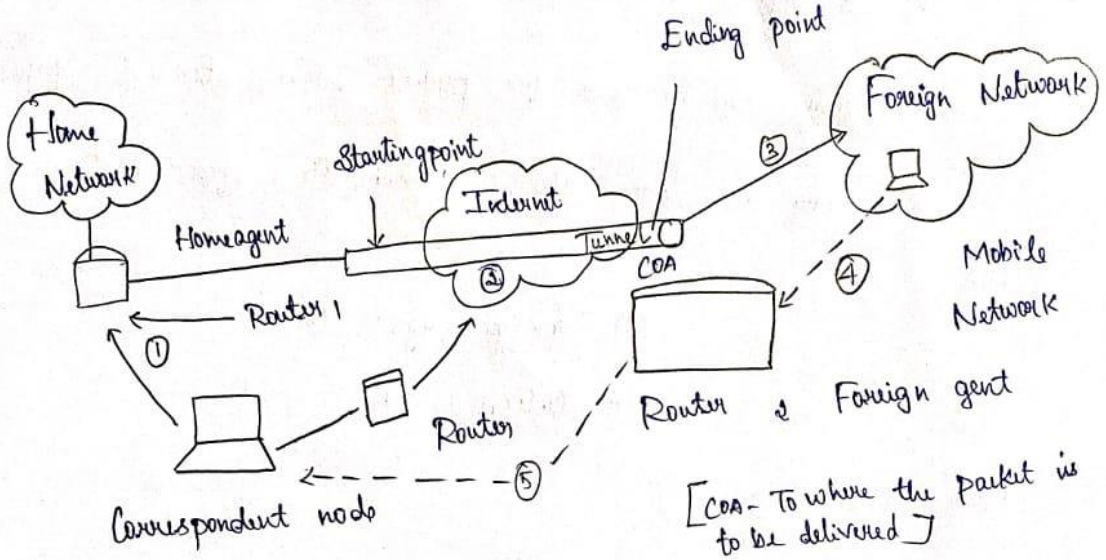
*) Home Agent maintains location register.

*) The tunnel for packets toward Mobile Node starts at the Home Agent.

7) IP Packet Delivery (or) Tunneling & Encapsulation

*) It allows you to address a package and drop it in the system but there's no direct link between you and the recipient.

*) It establishes a connection b/w two hosts, so that they can send messages back and forth for the period of time.



(1)

=> Home Network & Foreign Network -> Source

=> One router is connected to Home network is called Home Agent.

=> Home Agent will register your mobile ip.

(2)

=> Foreign network is connected to one router is called Foreign Agent.

=> In between internet is placed, it have tunnel. It is used to pass datagrams.

Steps

1) Corresponding node is sending the information to Router1

2) Home agent is passing the information through tunnel consisting of datagram.

3) The datagram is sending to foreign agent with the help of Care of Address.

4) Foreign Agent receive the information and passes it to the mobile node.

5) Mobile node sending back to the foreign agent

6) Again the information is passes to the corresponded node. Then the cycle repeats.

7) The information will be passing like a triangle.

8) Correspondent Node wants to send an IP packet to the Mobile Node.